Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte MARK S. THOMPSON, JAMES T. BEALS, PHILIP H. MCCLUSKEY, DAVID W. MCKEE, MICHAEL C. LANG, FRED J. LUSSIER, JOSEPH A.L. LEDOUX, DAT T. NGUYEN and PAUL BENNETT

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Appeal No. 2000-1737
Application No. 08/965,180

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ON BRIEF

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Before CALVERT, PATE, and STAAB, Administrative Patent Judges.

PATE, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 and 4 through 7. Claims 2, 3, and 8-11 are subject to a restriction requirement and have been withdrawn from consideration. These are all the claims in the application.

The claimed subject matter relates to an elevator safety brake. At least a portion of the friction surface of the brake comprises an alloy material formed from approximately 99.4 weight percent molybdenum, 0.5 weight percent titanium, and 0.1 weight percent zirconium. This alloy provides a brake with a high coefficient of friction and low wear suitable for use in a high speed, high load elevator.

Claim 1, appended to appellants' brief, is further illustrative of appellants' claimed subject matter.

According to appellants' brief, claims 1 and 4 through 7 stand or fall together.

The references of record relied upon by the examiner as evidence of obviousness are:

Black	3,841,949	Oct. 15, 1974
Marin	3,871,934	Mar. 18, 1975
Okada et al. (Okada '827)	GB 2 274 827	Aug. 10, 1994
Okada et al. (Okada '451)	GB 2 287 451	Sep. 20, 1995

Promisel, N. E. "The Science and Technology of Tungsten, Tantalum, Molybdenum, Niobium and Their Alloys." (Published 1964), pg. 572.

THE REJECTIONS

Claims 1 and 4 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the British patent Okada '451 in view of The Science and Technology article and Marin. According to the examiner, Okada discloses an elevator safety brake having a molybdenum alloy friction surface. Okada does not disclose the specific alloy formed of 99.4 percent molybdenum, 0.5 weight percent titanium, and 0.1 weight percent zirconium. The examiner further states that The Science and Technology article discloses an alloy formed of molybdenum plus 0.5 weight percent titanium and .07 weight percent zirconium. The examiner notes that the .07 weight percent zirconium would round off to the 0.1 percent zirconium claimed. Finally, the examiner states that Marin is relied upon to show known examples of molybdenum, titanium, and zirconium used as friction materials. Furthermore, the examiner takes official notice that molybdenum, titanium, and zirconium have known frictional properties.

Based on these findings, it is the examiner's conclusion that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed

the molybdenum alloy of Okada to have the composition taught by the article in order to increase the hardness and strength of the frictional surface at elevated temperatures.

Claim 5 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Okada '451 in view of The Science and Technology article and Marin as applied to claims 1 and 4 and further in view of patent '827 to Okada. The examiner states that Okada '827 discloses a cross-hatch pattern on the frictional surface 9d. Therefore, it is the examiner's conclusion that it would have been obvious to have constructed the tiles of Okada '451 to have a cross-hatch pattern as taught by Okada '827 in order to reduce abrasion on the guide rail and eliminate uneven contact.

Claims 6 and 7 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Okada '451 in view of The Science and Technology article and Marin and further in view of Black. According to the examiner, Black would have rendered obvious at the time the invention was made the placement of tiles in Okada '451 via a layer of heat resistant rubber to provide high conformability in the elevator safety brake.

OPINION

We have carefully reviewed the rejections on appeal in light of the arguments of the appellants and the examiner. As a result of this review, we have determined that the applied prior art does not provide an evidentiary basis for a prima facie case of obviousness under section 103. Accordingly, the rejections of claims 1 and 4 through 7 are reversed. Our reasons follow.

We are in agreement with the examiner that Okada '451 discloses an elevator safety brake with a brake shoe 5a for contacting guide rail 3. Okada '451 also discloses a means for pressing the friction surface against the guide rail. Okada '451 differs from the invention of claim 1 in that, while Okada '451 discloses several molybdenum alloys, Okada '451 does not disclose the specific alloy claimed.

We further agree with the examiner that The Science and Technology article discloses a molybdenum alloy containing molybdenum with 0.5 weight percent titanium and 0.07 weight percent zirconium. The examiner further states that the zirconium rounds to 0.1 weight percent. However, The Science and Technology article does not include any suggestion or

teaching of the proper use of this alloy or its suitability for any purpose.

While the examiner has cited Marin, for its teaching of a known example of molybdenum, titanium, and zirconium used as a friction material, we are in agreement with appellants that the Marin discussion of molybdenum, zirconium, and titanium is in the context of finally divided individual additive particles of each of these elements held in place on tape by phenolic condensation product binders. As such, the Marin disclosure can in no manner suggest the use of The Science and Technology alloy in the safety brake pad of Okada. The examiner's statement that Marin discloses "the essence of applicants' invention" is erroneous for two reasons. First, as noted above, Marin suggests using individual particles of nitrides of the refractory metals including titanium, zirconium and the like rather than an alloy of these materials. Secondly, obviousness is not determined with respect to finding "the essence of an invention" in the prior art.

Thus we find ourselves in agreement with appellants that there is no teaching or suggestion of using The Science and

Technology alloy in the safety brake of the Okada elevator. As noted above, Marin certainly does not provide this suggestion, inasmuch as Marin is directed to individual particles, as appellants point out in the reply brief. Having found no suggestion for the examiner's proposed combination of references, we must conclude that the examiner's prima facie case of obviousness lacks a proper evidentiary basis with respect to claims 1 and 4.

We have further reviewed the other applied references to Black and Okada, but we find therein no teaching or suggestion which would bridge the evidentiary gap we have found with respect to the rejection of the independent claim. Accordingly, the rejections of all claims on appeal are reversed.

REVERSED

IAN A. CALVERT	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
WILLIAM F. PATE, III	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
LAWRENCE J. STAAB	)	
Administrative Patent Judge	)	

WFP:lbg

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